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Hellweg

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(54) **QUICK RELEASE GARMENT**

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CPC ***F41H 1/02*** (2013.01); *A41D 13/0012* (2013.01); *A41D 2400/44* (2013.01)

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See application file for complete search history.

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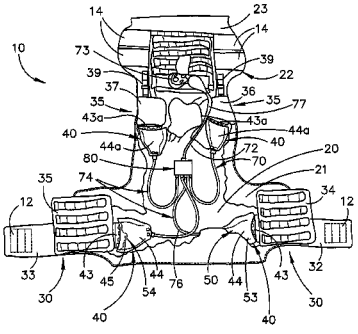
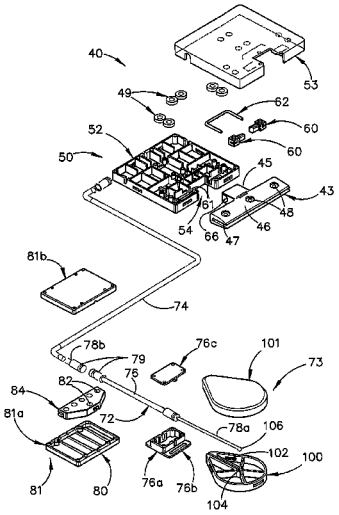
(57) **ABSTRACT**

Exemplary embodiments of a quick release garment can be provided. The exemplary garment can include a plurality of co-operable garment panels, which when interconnected, can form a garment in a condition wrapped about an upper torso of a person, a plurality releasable mechanical latches, each latch having a first and a second portion and at least one latch element biased towards an engaged condition, releasably engageable to interconnect the garment panels, and a release arrangement operable in a single operation to release the latches. Further, the latches can be structured so that the single operation allows the garment to fall from the upper torso, and the garment can thereafter be rapidly restorable to the condition wrapped about the upper torso by re-engaging each of the latches by pushing the first and second portions together against the bias to re-engage the latch element(s).

37 Claims, 8 Drawing Sheets





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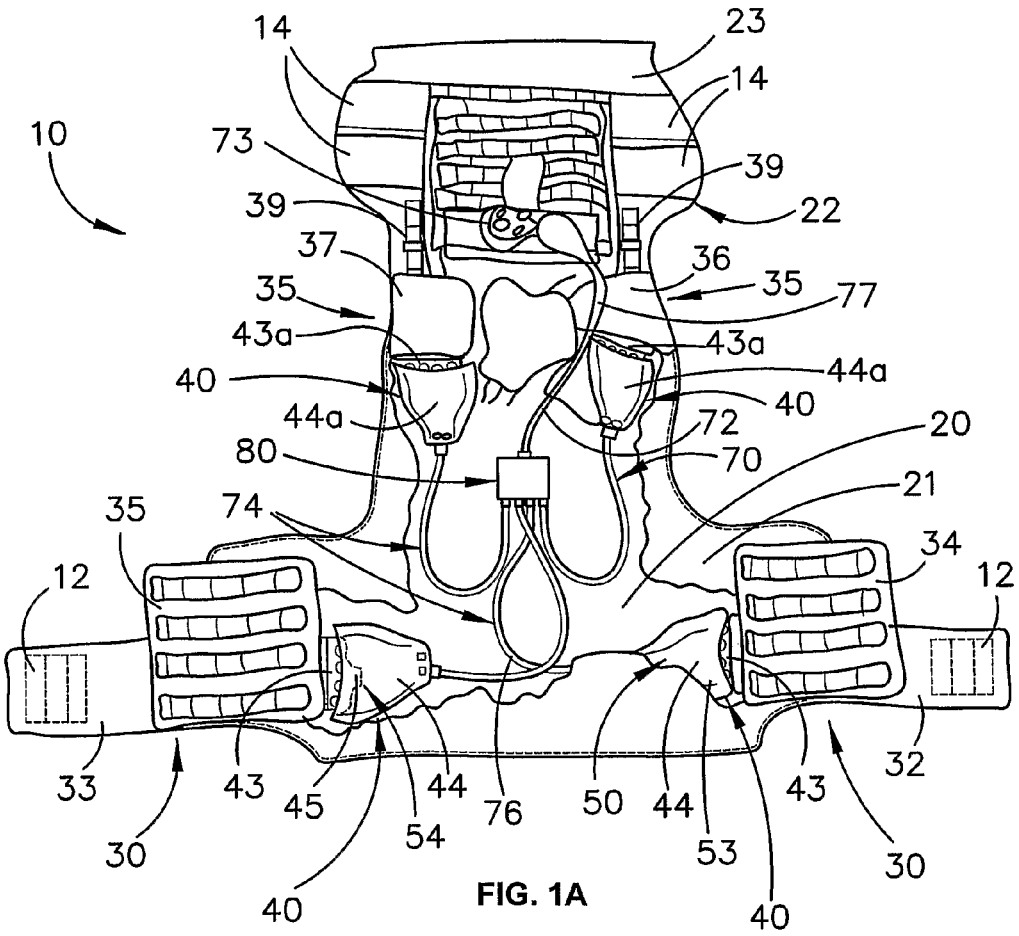
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23
14
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73
39
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22
37
36
35
35
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43a
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44a
40
72
20
80
70
21
35
74
34
12
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40
40

FIG. 1A

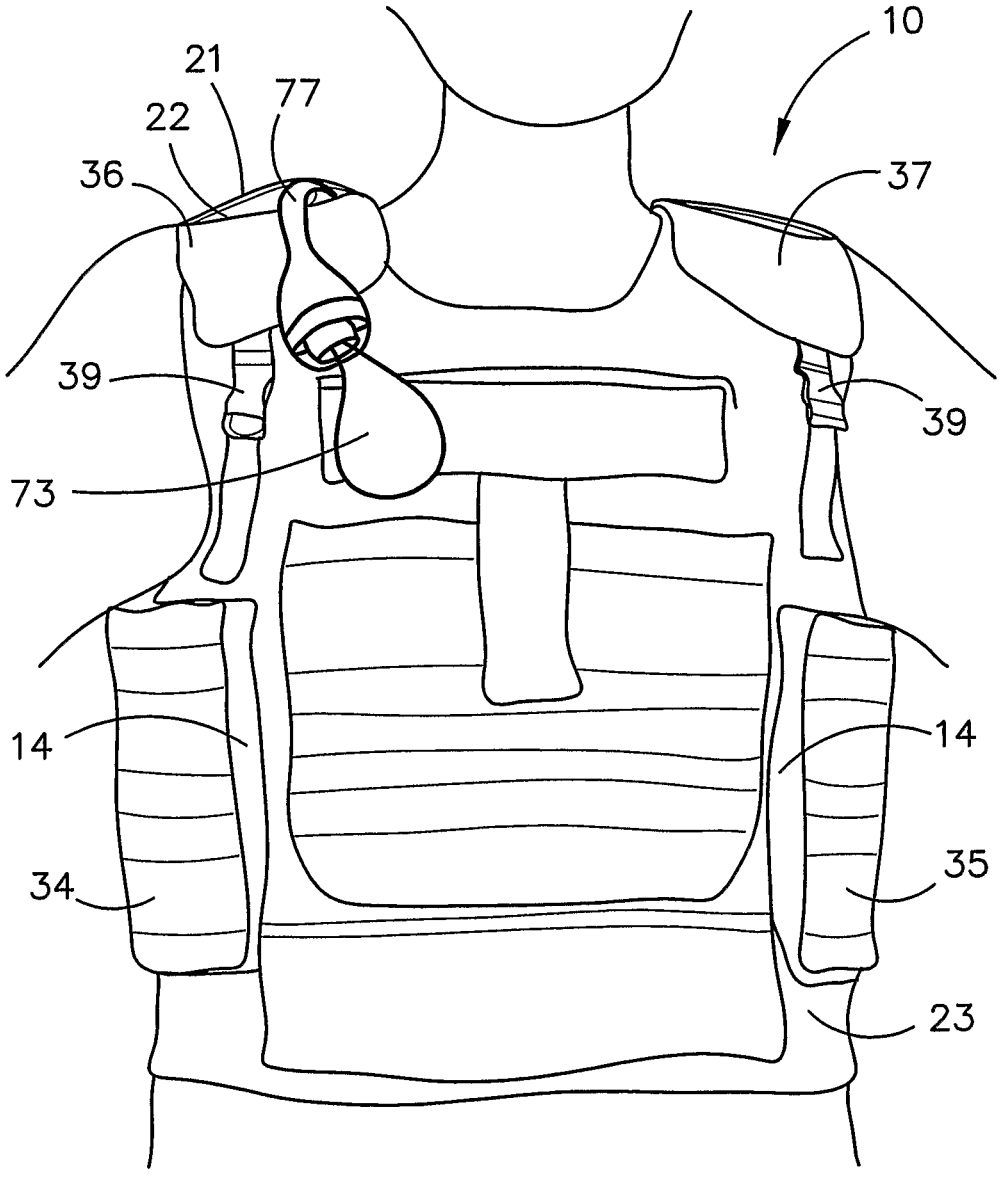


FIG. 1B

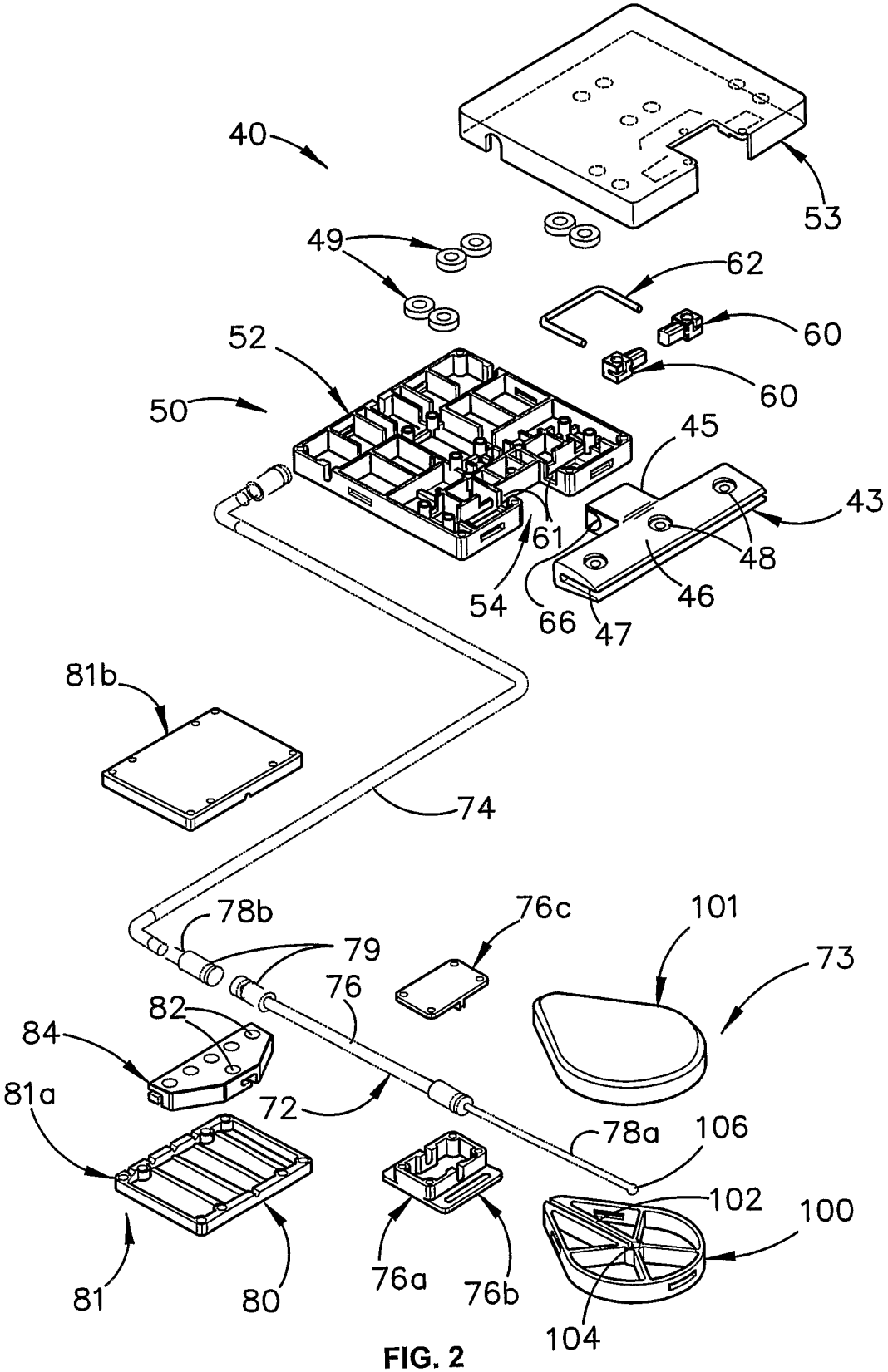
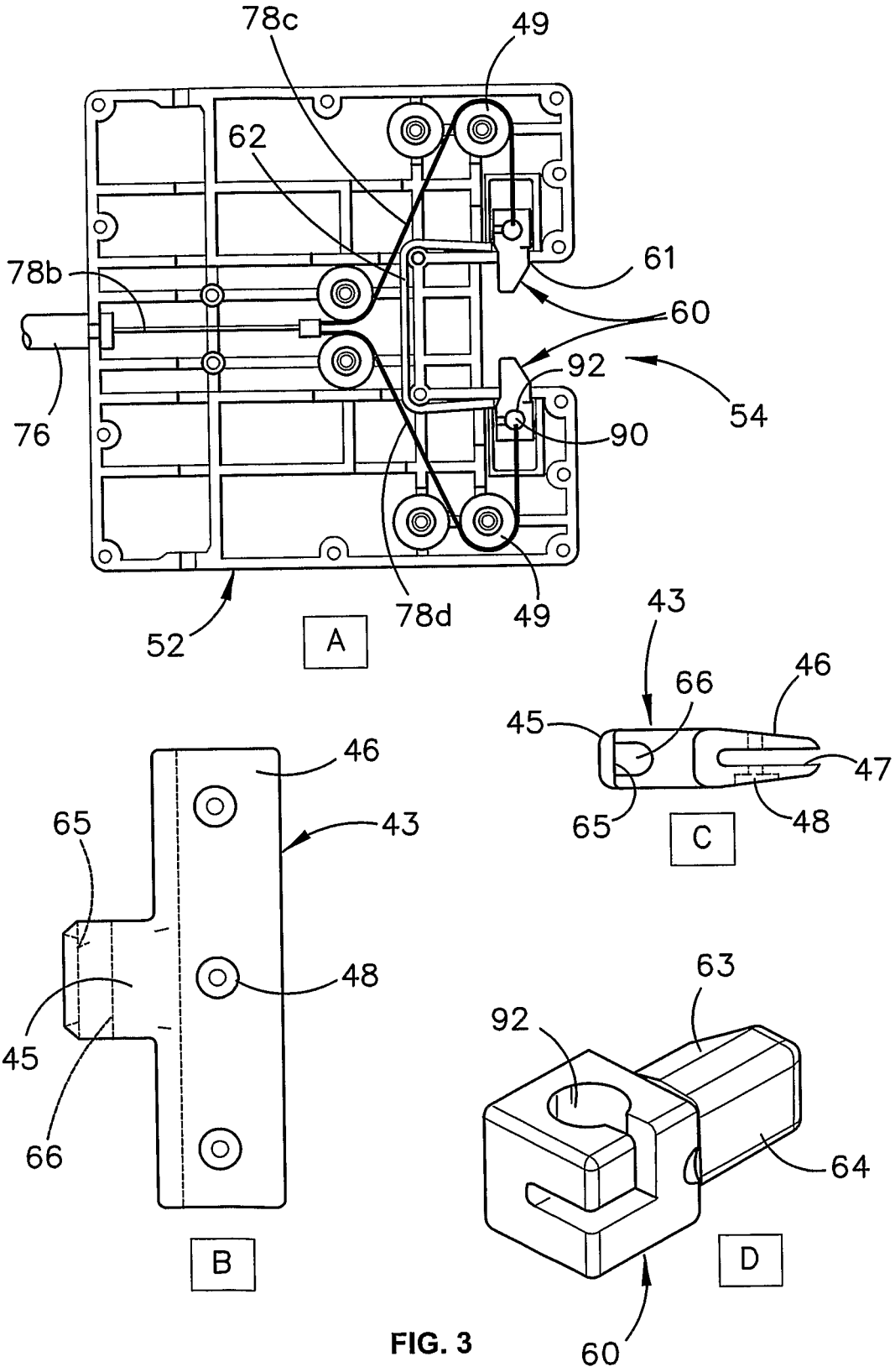

40
53
49
62
60
60
52
50
45
43
48
46
61
54
66
47
81b
74
78b
79
76c
101
73
76
82
84
72
81a
78a
106
102
100
76a
76b
104
81
80

FIG. 2


78c
49
62
61
78b
60
92
54
76
90
52
78d
49
A
43
66
46
45
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65
48
C
46
65
43
48
45
66
B
63
92
64
D
60

FIG. 3

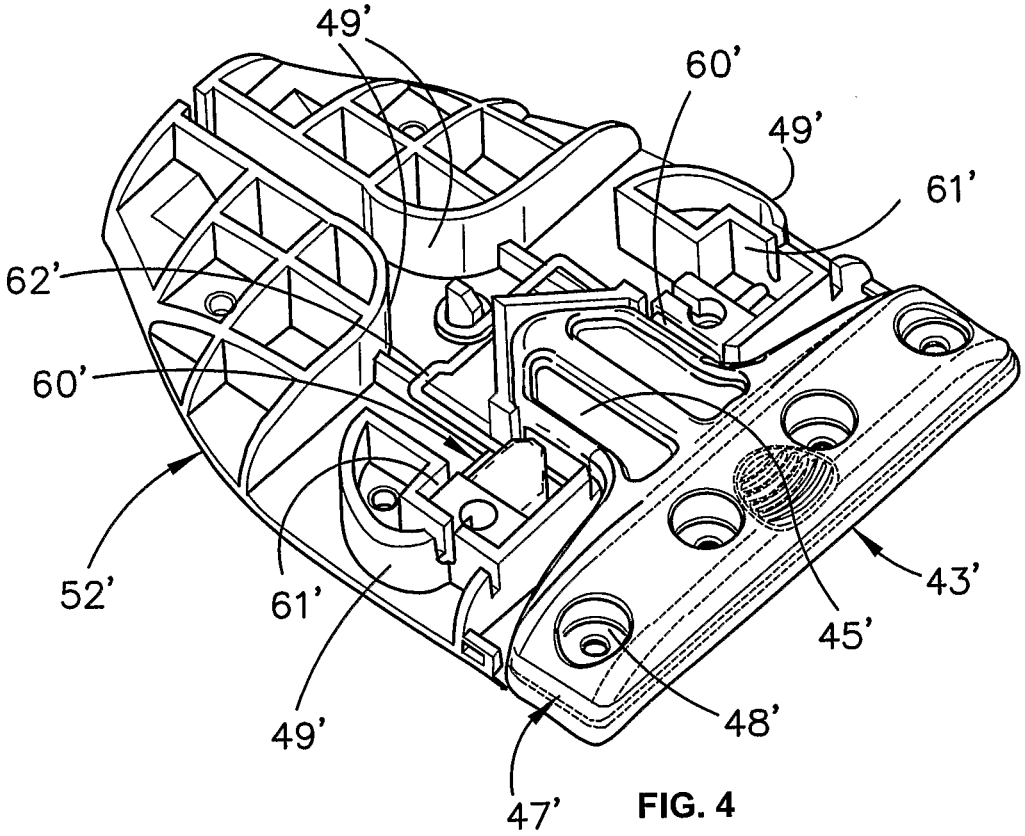

FIG. 4

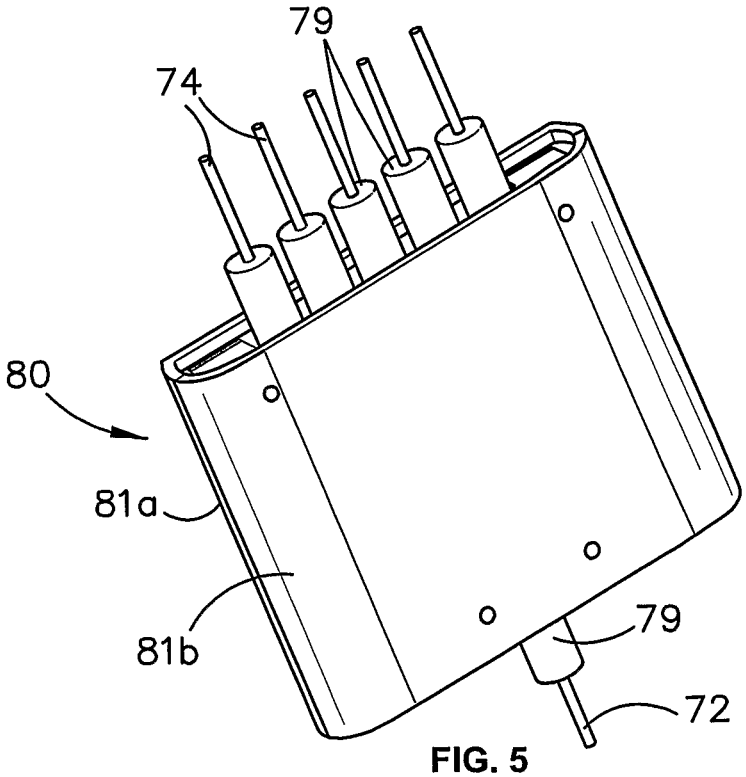

FIG. 5

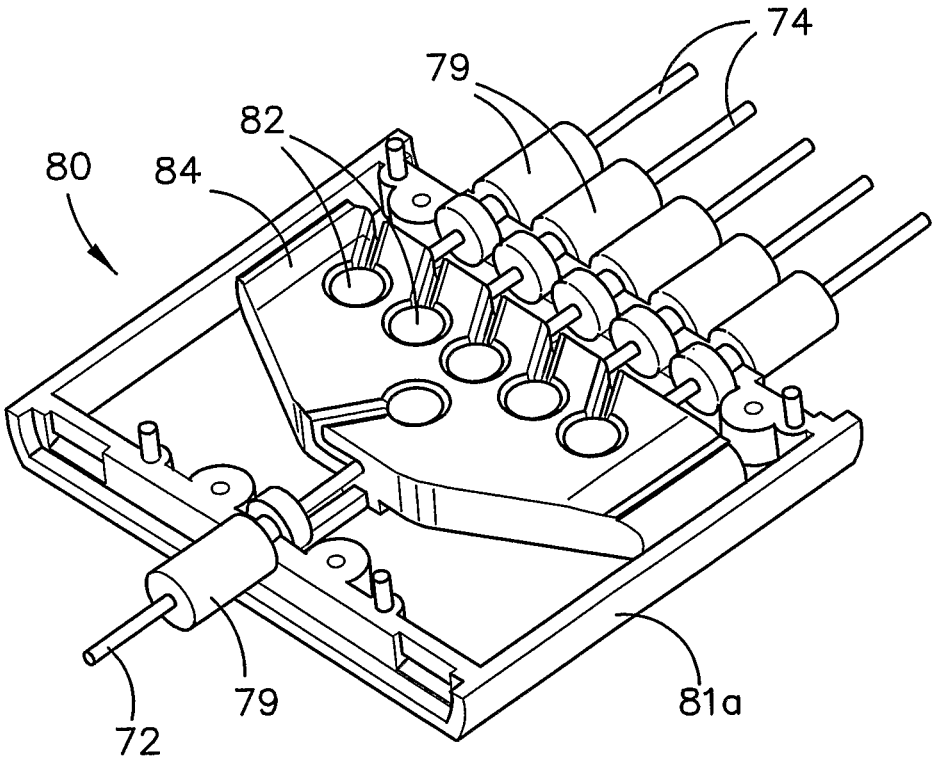

FIG. 6

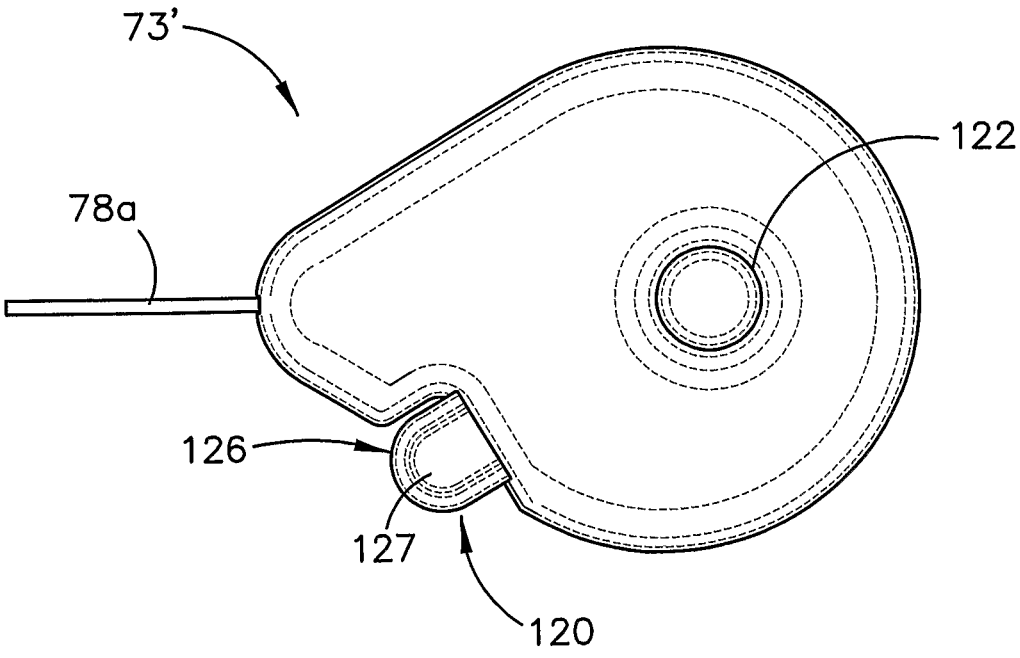

FIG. 7

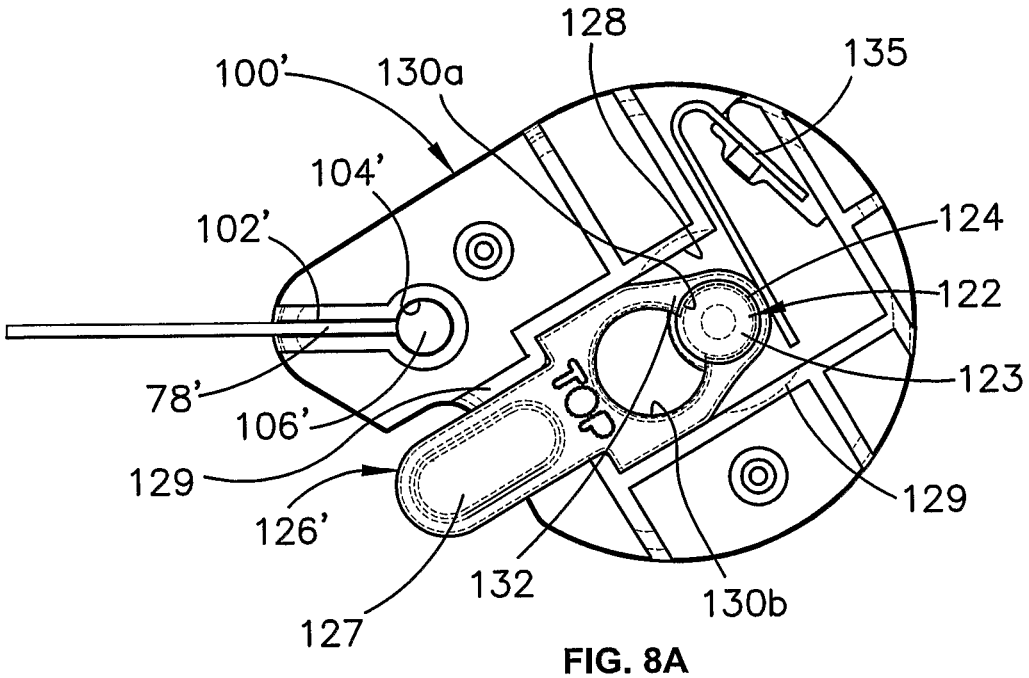
128
100'
130a
135
104'
102'
124
122
123
78'
106'
129
126'
132
130b
129
127

FIG. 8A

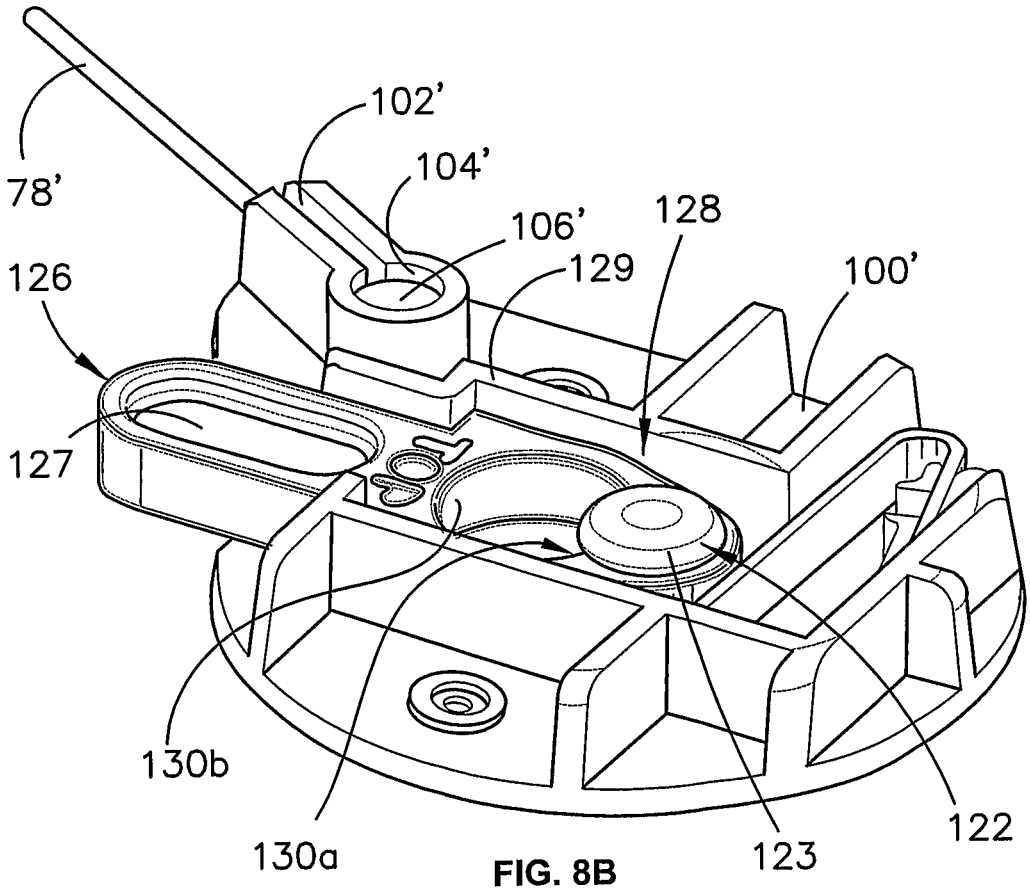
102'
78'
104'
106'
128
126
129
100'
127
130b
130a
123
122

FIG. 8B

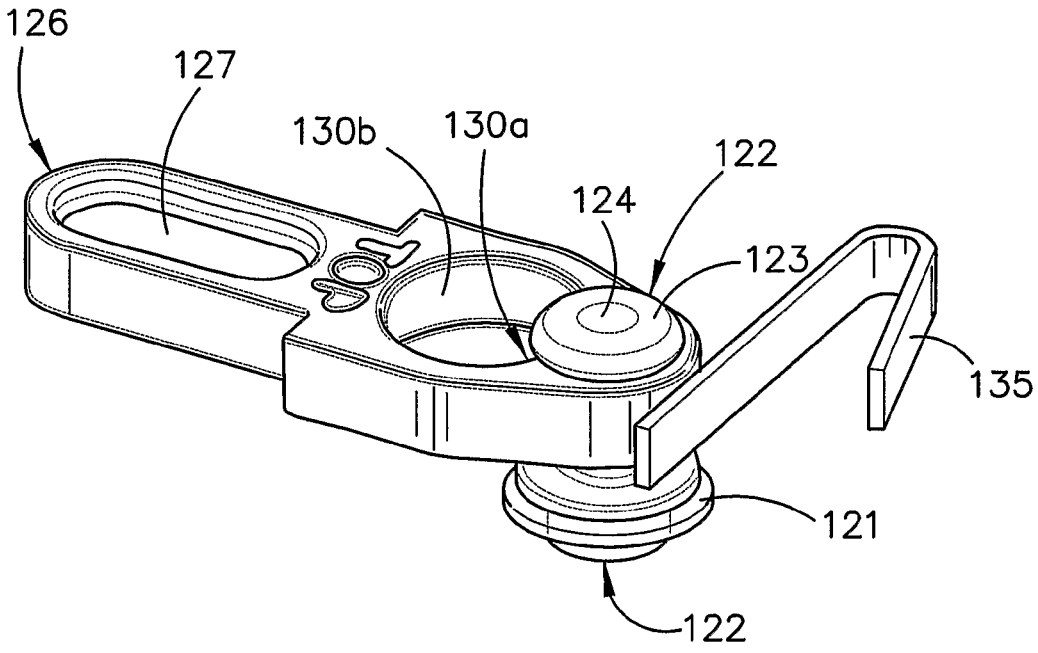

FIG. 9

QUICK RELEASE GARMENT

CROSS REFERENCE TO PRIOR APPLICATIONS

This application is a U.S. National Stage application of International Application No. PCT/AU2010/000301, filed on Mar. 15, 2010 and published on Sep. 16, 2010 as International Publication No. WO 2010/102351, which claims priority to Australian Patent Application No. 2009901069 filed on Mar. 13, 2009. The entire disclosures of these applications are incorporated by reference herein in their entireties.

FIELD OF THE DISCLOSURE

The present disclosure relates generally to garments for the upper torso that include arrangements for quick release when such action is called for, for example in the event of an emergency. The present disclosure can be, for example, of particular application to load-bearing vest-type garments of a kind commonly worn by military and police personnel.

BACKGROUND OF INFORMATION

Load-bearing vest-style garments are commonly worn by military and police personnel so that they may carry equipment such as tools, radios, truncheons, small weaponry, handcuffs, mace or taser devices and anti-ballistic protection panels. It can be appreciated that garments of this type therefore tend to be bulky and heavy when loaded, and may restrict the movement of the wearer. A recognized requirement can be therefore to be able to ditch these vests with minimal delay, for example, in an emergency situation such as a crash-landing helicopter or in order to be rescued from a damaged vehicle or other entrapment situation.

A known approach to providing for quick release of load-bearing vest-style garments can include a separate set of rapid release linking devices in the garments. Typically, donning and securing of these garments under normal conditions can involve manual engagement of a number of Velcro (hook and loop) primary fasteners at or adjacent the waist and adjacent each shoulder. Normal doffing of the garment simply typically requires disengagement of the primary fasteners. A separate set of linking elements can be associated with either the hook or the loop component of the primary fasteners for effecting quick release of the garment from the wearer's body.

For example, International Patent Publication No. WO 2008/108856 describes an anti-ballistic vest garment having a quick release mechanism. The front panel of the garment is attached to side interface panels by respective sets of interleaved loops joined by respective cables. The cables meet in end loops at the centre bottom of the garment and pass up the respective sides and along the top of the front panel. The end loops provides handles by which the wearer can simultaneously pull both cables out of the interleaved loops, whereupon the garment drops off the wearer.

In the arrangement described in U.S. Published Patent Application No. 2007/0107109, a garment can be made from a number of panel components drawn together at a central location in the garment and attached using aligned eyelets, a common loop pulled through the eyelets and a single pull cord threaded through the loop. In this case, the single cord can be pulled to release multiple garment components simultaneously.

These systems relying on a single draw cable may be effective in causing substantially simultaneous separation of multiple garment components and therefore the rapid release of the garment from the wearer's body. However, in many of the instances where quick release of the garment is desired, it can be equally preferred that the garment is subsequently easily and quickly reinstated to the wearer's body. Such instances can include, e.g., scrambling through a narrow opening when on patrol, escaping from a helicopter or vehicle, entering a damaged vehicle to retrieve an injured or trapped soldier, and climbing up a wall or other structure. Indeed, it may be imperative in some cases that a soldier is able to rapidly redeploy the garment in order to continue the mission, or for their own safety. The prior arrangements that rely on a single draw cable or cord extending through multiple loops or eyes in the garment cannot be easily reassembled on the wearer's body and can require a tedious process of re-threading the cable or cord through all of the loops or eyelets in the correct order.

In order to more readily facilitate reassembly of a protective vest subsequent to removal, International Patent Publication No. WO 2007/146810 describes an arrangement in which one or more Velcro (hook and loop) or snap link fastener strips are arranged adjacent respective zipper/buckle fastenings. The arrangement is such that the or both fastener strips can be very quickly separated by a single motion that pulls apart the vest collars: the garment is fully opened for removal but does not drop off. In effect, this approach entails opening of the garment, rather than its complete dropping away from the body, as a compromise in order to allow more rapid re-closure.

It is an object of the present disclosure to provide for quick release of a garment such as a load-bearing vest in a manner that facilitates quick redeployment of the garment.

Reference to any prior art in the specification is not, and should not be taken as, an acknowledgment or any form of suggestion that this prior art forms part of the common general knowledge or that this prior art could reasonably be expected to be ascertained, understood and regarded as relevant by a person skilled in the art.

SUMMARY OF EXEMPLARY EMBODIMENTS OF THE DISCLOSURE

Exemplary embodiments of the present disclosure can provide a quick release garment including:

a plurality of garment panels co-operable when interconnected to form a garment in a condition wrapped about at least an upper torso of a person;

a set of releasable mechanical latches, each having a first and a second portion and at least one latch element biased towards an engaged condition, releasably engageable to interconnect the garment panels to form the garment in the condition; and

release elements carried on the garment and operable in a single operation by one hand to mechanically and substantially simultaneously release the latches by disengaging the latch element(s);

where the set of releasable mechanical latches can be arranged so that the single operation allows the garment to fall from said upper torso, and where the garment is thereafter rapidly restorable to the condition wrapped about at least the upper torso from which it fell, by re-engaging each of the releasable mechanical latches by pushing the first and second portions together against the bias to re-engage the latch element(s).

Advantageously, the elements carried on the garment and operable in a single operation by one hand to mechanically and substantially simultaneously release the latches includes a pull cord or cable configuration in which a single cord or cable with a hand grip at its remote end can be arranged to

pull, via a multiplex coupling device, respective cables coupled to the mechanical latches.

In another exemplary embodiment, the present disclosure can provide a quick release garment including:

a plurality of garment panels co-operable when interconnected to form a garment in a condition wrapped about at least an upper torso of a person;

a set of releasable mechanical latches releasably engageable to interconnect the garment panels to form the garment in the condition; and

release elements carried on the garment and operable in a single operation by one hand to mechanically and substantially simultaneously release the latches, which means includes a pull cord or cable configuration in which a single cord or cable with a hand grip at its remote end can be arranged to pull, via a multiplex coupling device, respective cables coupled to the mechanical latches, whereby the garment falls from the upper torso.

In either of the embodiments, each of the mechanical latches may include one or preferably two latch elements that are spring-loaded to the latching condition but withdrawable by the aforesaid cable against the spring, and a tongue element having latchable formations cooperable with the latch elements. The arrangement can be such that the tongue element may be pressed home in a fashion that pushes back the latch elements for effecting the reengagement of the releasable mechanical latches.

The set of releasable mechanical latches preferably can include one such latch that when engaged interconnects two of the garment panels adjacent the upper torso below the armpits, and at least one such latch that when engaged interconnects two of the garment panels of which one extends over at least one shoulder of the upper torso. More preferably, there can be a pair of the latches below the armpits and a pair associated with garment panels that extend over the respective shoulders.

Preferably, the garment includes a second set of devices for interconnecting garment panels of the plurality if garment panels, which second set are distinct from the set of releasable mechanical latches. The second set of devices for interconnecting garment panels can be selected for use in donning the garment on the normal commencement of duty involving the wearing of the garment, as distinct from occasions when the garment is to be restored to the aforesaid condition wrapped about at least the upper torso from which it is fallen, by re-engaging the releasable mechanical latches. Suitable such devices include complementary hook and loop fastener pads and extended buckles such as snap engageable/press releasable buckles.

Typically, there can be garment panels among the plurality of garment panels that have one of the set of releasable mechanical latches at one location thereon, and one of the set of interconnecting devices at another location thereon.

Advantageously, the quick release garment can further include elements to protect against inadvertent or accidental release of the latches. The elements to protect may be a safety catch device, whereby the hand grip is releasably attached to the garment, such that a positive release of the safety catch must occur before the hand grip can be pulled with respect to the garment, whereby the release of the safety catch and the pulling of the hand grip combined constitutes the single operation by one hand.

Preferably, the multiplex coupler can be held in a fixed location relative to the garment. The pull cord preferably translates relative to the multiplex coupler. The pull cords may be covered by but not fixed to an outer sheath.

The first portion can be preferably a female housing having a recess, and the second portion is preferably a male housing having a protruding tongue for releasable insertion into the recess of the first portion. The latch elements may be biased to project from within the female housing into the recess, whereby they latch within formations in the tongue of the male housing. The latch elements can be advantageously chamfered pins. The recess can be preferably covered and the latch elements can be preferably activated by chords pulling against the bias.

These and other objects, features and advantages of the exemplary embodiment of the present disclosure will become apparent upon reading the following detailed description of the exemplary embodiments of the present disclosure.

BRIEF DESCRIPTION OF THE DRAWINGS

The present disclosure will now be further described, by way of example only, with reference to the accompanying drawings, in which:

FIG. **1**A is a partially open laid flat view of a load-bearing vest garment in accordance with an embodiment of the present disclosure, with the outer layer of the back panel largely cut away so as to gain a better view of the quick release mechanism;

FIG. **1**B is a front view of the load-bearing vest garment of FIG. **1**A**1** assembled as worn by a user;

FIG. **2** is a fragmentary view of the principal components of the quick release mechanism in accordance with an embodiment of the present disclosure;

FIG. **3** is a set of diagrams of components of one of the mechanical latches of the quick release mechanism in accordance with an embodiment of the present disclosure;

FIG. **4** is a cut-away perspective view of a mechanical latch with internal modifications relative to the latch depicted in FIG. **3**;

FIGS. **5** and **6** are respectively a plan view and an internal isometric view of the multiplex coupler of the hand-operated cable mechanism;

FIG. **7** is a plan view of a modified form of the cable hand grip, fitted with a safety catch device;

FIG. **8**A is a view similar to FIG. **7** but with the top cover removed;

FIG. **8**B is a perspective view of the cable hand grip of FIG. **8**A; and

FIG. **9** is a fragmentary view of the safety catch slide with its mounting stud and spring in accordance with an embodiment of the present disclosure.

Throughout the figures, the same reference numerals and characters, unless otherwise stated, are used to denote like features, elements, components or portions of the illustrated embodiments. Moreover, while the subject disclosure will now be described in detail with reference to the figures, it is done so in connection with the illustrative embodiments. It is intended that changes and modifications can be made to the described exemplary embodiments without departing from the true scope and spirit of the subject disclosure.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

An exemplary embodiment of a garment illustrated in FIG. **1**A is an exemplary embodiment of a load-bearing vest **10** intended to be worn about the upper torso of military or police personnel, and includes, for example, multiple flexible panels, typically fabric panels, that include inner and outer back layers **20**, **21**, and inner and outer front layers **22**, **23**, that can

be interconnected and able to be assembled together about the upper torso of a wearer by means of a pair of side waistband assemblies **30** and a pair of shoulder strap assemblies **35**. In each case the back and front inner and outer layers match and can be assembled together by stitching or the like to define an interior space. The outer layers typically can exhibit camouflage colors on their outside and can normally carry a variety of open pockets, zippered pockets, tie straps and the like by which the wearer can carry a selection of devices, tools and weapons according to the requirements of the day.

The side waistband assemblies **30** and the shoulder strap assemblies **35** can incorporate two different sets of devices for interconnecting the back and front panels. At each assembly, there can be, firstly, a conveniently engageable and releasable fastening device for use when "normally" donning the garment or doffing it at the conclusion of an operation, and, secondly, a mechanical latch that is releasable, by means to be discussed, to achieve quick release of the garment in an emergency. In accordance with exemplary embodiments of the present disclosure, several releasable mechanical latches can be substantially simultaneously released.

Each side waistband assembly **30** can have an inner elongate waistband panel **32**, **33**, and an outer side panel **34**, **35** of a profile nearer to square. On the inner face, at the front end of each waistband panel **32**, **33**, can be affixed one of the cooperating pads **12** of a hook and loop fastener, the other pad **14** can be disposed on the outside face of front panel **23**. Fitted to the other or rear end of the waistband panels **32**, **33**, and firmly sandwiched between the waistband panels **32**, **33** and the respective side panel **34**, **35**, can be a first component, tongue **43** of a mechanical latch **40**.

Similarly, as shown in FIGS. **1**A and **1**B, each shoulder strap assembly **35** can have a shoulder strap panel **36**, **37** that in situ lies over the wearer's shoulder and can be fastened to the front panel by an outside strap and buckle **39**. At the rear end, behind the shoulder

In situ, can be fitted a tongue component **43***a* similar to the tongue components **43** of the waistband panels **32**, **33**. Firmly secured within the interior space formed between inner and outer back layers **20**, **21** can be the four second components, female components **44**, **44***a* of the mechanical latches **40** of which tongue components **43**, **43***a* form the complementary male part. Each of these female components **44**,**44***a* can have a rectangular two-part housing **50**, with a base **52** (see FIGS. **2** and **3**), a cover **53** and a central rectangular recess **54** at a front edge. This recess **54** can receive a projecting tongue **45** of rectangular shape matching the recess: tongue **45** can be formed integrally with a cross piece **46** of tongue component **43**, **43***a*. The cross piece **46** can be of a u-shaped side cross section (see FIG. **2**) to define a slot **47** to receive the respective fabric of the garment panel to which it is secured by spaced fasteners in countersunk apertures **48**.

Recess **54** can have a pair of slidable latch elements, pins **60** located in slots **61** in opposed positions to either side of the recess. Latch pins **60** can be biased to their forward condition protruding into recess **54** by a shaped spring-steel spring **62** that can embrace the latch pins and bias them towards each other. Latch pins **60** further can have forward chamfered faces **63** (see FIG. **3**D) by which tongue **45** can push back the latch pins as the tongue enters the recess, and respective rearward faces **64** that engage a back edge **65** of a rectangular transverse bore **66** in tongue **45**. Bore **66** can be dimensioned to slidably receive the two latch pins at its respective ends. Spring **62** can ensure that the two latch pins snap into place in this transverse bore **66** once tongue **45** is far enough into the recess **54**. It can be appreciated that the latch pins **60** may be located on the tongue component **43** and be biased outwardly into apertures in the female component **44**.

A plurality of (e.g. four) mechanical latches **40**—two at or above the waist line below the armpits and two at the rear of the shoulders—can be substantially simultaneously releasable at will by a hand-operated cable mechanism **70** of the bowden cable type. A primary cable **72** can have a hand-grip **73** by which the cable can be actuable, by being pulled, to in turn activate each of four secondary cables **74** coupled to the respective female components **44** of the latches **40**. This transfer of the hand tug on the primary cable can be via a mechanical multiplex coupler **80**, which can be fastened to the vest. Each of the cables **72**,**74** can have an external sheath **76** and an internal wire **78***a*, **78***b*. The sheaths can be fixed, to prevent their translation, to the housings **50** of the latches **40**, to the housing **81** of the multiplex coupler **80** and, in the case of the primary cable **72**, via a sheath lock **76***a* (including base **76***b* and cover **76***c*) to a fabric outer sheath **77** fastened at its rear end to a top edge portion of the back panels **20**, **21**. The sheaths can protect the cables and allow the cables to move even though the garment may be squashed against a surface. Housings **50** and **81** are in turn fastened to the back panels **20**, **21**. Handgrip **73** can be a two-part housing **100**, **101** of teardrop shape with an internal wire channel **102** terminating at an enlarged end **104** to locate a bulb **106** on the end of primary cable wire **78***a*.

Each of the five wires **78***a*, **78***b* can have an end piece **79** of cylindrical form that can be held in a matching aperture **82** (FIG. **6**) of an internal slide **84** within the housing **81** of multiplex coupler **80**. Housing **81** can include a base **81***a* and a cover **81***b*. Drawing the wire **78***a* of primary cable **72** relative to its sheath can pull the slide **84** forward in its housing **81** and thereby in turn tug on the wires **78***b* of the secondary cables. FIG. **3**A illustrates how, within the housings **50** of mechanical latches **40**, the respective wire **78***b* can be forked into two branch wires **78***c*, **78***d* that can be led about pulleys **49**, to be retained by terminal endpieces **90** in matching apertures **92** in the latch pins **60**.

In a modification or another exemplary embodiment (see FIG. **4**), pulleys **49** can be dispensed with and the cable branch wires can be guided to latch pins **60'** by suitably profiled internal integral guide walls **49'**. The latch pins **60'** can be shown in the two positions, one biased into recess **54** and bore **66**, the other withdrawn. The housing in this embodiment can provide protection over the recess to seal against dust entering and locking up the latch pins **60'**.

For example, the cable mechanism **70** can be pre-dimensioned accurately so that the arrangement can be operable in a single operation, by one hand drawing on handgrip **73**, to mechanically and substantially simultaneously release latches **40**. Because this release of the latches can wholly separate the garment into two segments—the assembly of the back panels **20**, **21** with the built in cable and latch configuration and the front panels **22**, **23** still attached to the waist band panels, side panels and shoulder strap panels—this single operation by one hand can be effective to allow the garment to fall from the torso on which it is worn, thus achieving the requirement for quick release of the garment.

When the wearer has carried out the action which necessitated quick removal of the garment (e.g., perhaps pulled a colleague from a damaged vehicle or otherwise out of harm's way, crawled through a narrow opening, or cleared an obstacle) the garment can thereafter be rapidly restorable to its condition wrapped about the wearer's upper torso from which it fell by draping the two separated sections in position and rapidly one-by-one re-engaging the mechanical latches by pushing the respective tongue components **43** home into

the recesses **54** of the female components **44**. One way in which this might be best achieved would be, e.g., to first fasten the shoulder latches and then drop the garment onto the shoulders about the wearer's head before fastening the side latches.

FIGS. **7** to **9** depict an exemplary embodiment of a modified cable hand grip **73'** fitted with a safety catch device **120** to prevent inadvertent or accidental release of the vest. A primary cable wire **78'** can be retained as before by locating a bulb **106'** at the end of the wire in an enlarged end **104'** of a wire channel **102'**. However, in this exemplary case, the hand grip **73'** can be normally immovably retained on the garment by means of a stud **122** sewn at its base into the garment (represented at **121** in FIG. **9**) and having a cylindrical head **123** that protrudes into but not through the interior of the hand grip and has an enlarged end **124**.

A slide **126** can be linearly moveable in a guideway **128** defined by internal ribs **129**. Stud head **123** can protrude into the centre of the guideway **128** and slide **126** can have two apertures: a first aperture **130***a* that snugly embraces stud head **123** but can be smaller than stud end **124**, and a second adjacent aperture **130***b*. A neck **132** between apertures **130***a*, **130***b* can be deformable or compressible to allow the stud head to move relatively between the apertures. When stud **122** protrudes through aperture **130***a*, preferably, hand grip **73'** cannot be lifted off the stud, to permit operation of the cable release mechanism; when the stud protrudes through aperture **130***b*, there is preferably no such restraint.

Slide **126** can be biased, by a spring steel clip **135**, to the position in which stud **122** can be in aperture **130***a* and the outer end of the slide can protrude from housing **100'** as a push "button" **127**. The wearer who wishes to operate the quick release mechanism preferably executes, in one operation, through two actions, e.g.: firstly press in the "button" **127**, which positions stud **122** in aperture **130***b*, and then simultaneously lift the hand grip housing **100'** off the garment and pull it down to operate the cable mechanism **70** to release the mechanical latches **40** as in the embodiment of FIGS. **1** to **3**, **5** and **6**.

It can be understood that the exemplary embodiments of the present disclosure disclosed, described and defined in this specification extends to all alternative combinations of two or more of the individual features mentioned or evident from the text or drawings. All of these different combinations constitute various alternative aspects of the present disclosure.

The invention claimed is:

1. A quick release garment, comprising:

a plurality of co-operable garment panels, which when interconnected, form a garment in a configuration wrapped about at least an upper torso of a person;

a plurality of releasable mechanical latches, each of the latches having a first portion, a second portion and at least one latch element provided with a bias towards an engaged condition, the mechanical latches being releasably engageable to interconnect the garment panels to form the garment in the configuration wrapped about at least an upper torso of a person; and

a release arrangement including a pull cord or a cable configuration in which a single cord or a cable with a hand grip at its remote end is structured to pull, via a multiplex coupling device, respective cables coupled to the mechanical latches, wherein the release arrangement is disposed on the garment and operable in a single operation by one hand to mechanically and substantially simultaneously release the latches by disengaging the at least one latch element, each latch element being disengaged by withdrawing the latch element against said bias;

wherein the plurality of releasable mechanical latches is structured so that the single operation allows the garment to fall from the upper torso, and

wherein the garment is rapidly restorable to the condition wrapped about at least the upper torso from which it fell, by re-engaging each of the releasable mechanical latches by pushing the first and second portions together, each latch element being pushed back against said bias until the latch element snaps into place and is reengaged.

2. The garment of claim **1**, wherein the multiplex coupling device includes a housing fastened to the garment structured for holding the multiplex coupling device in a fixed location relative to the garment.

3. The garment of claim **2**, wherein a movable element within the housing is attached to the single cord or the cable and to the respective cabled coupled to the latches, wherein a tug on the single cord or cable with the hand grip pulls the moveable element and thereby in turn tugs the respective cables.

4. The garment of claim **3**, wherein the single cord or the cable, and the respective cables, are non-fixedly covered by an outer sheath.

5. The garment of claim **1**, further comprising a protection arrangement structured to protect against an inadvertent release or an accidental release of the latches.

6. The garment of claim **5**, wherein the protection arrangement includes a safety catch device by which the hand grip is releasably attached to the garment, such that a positive release of the safety catch device must occur before the hand grip can be pulled with respect to the garment, wherein the single operation by one hand includes a release of the safety catch and the pulling of the hand grip.

7. The garment of claim **1**, wherein the single cord or cable, and the respective cables, are non-fixedly covered by an outer sheath.

8. The garment of claim **1**, wherein the at least one latch element is spring loaded to the engaged condition but withdrawable by the release arrangement against the spring, the first or second portion having a tongue element having a formation co-operable with the at least one latch element.

9. The garment of claim **1**, wherein the plurality of releasable mechanical latches includes one latch that when engaged interconnects at least two of the garment panels adjacent the upper torso below armpits, and at least one other latch that when engaged interconnects two of the garment panels of which one extends over at least one shoulder of the upper torso.

10. The garment of claim **1**, wherein at least a pair of the latches are provided below armpits and at least a pair associated with garment panels extend over respective shoulders.

11. The garment of claim **1**, wherein the garment includes a plurality of second devices for interconnecting garment panels of the plurality of garment panels, the plurality of second devices being distinct from the plurality of mechanical latches.

12. The garment of claim **11**, wherein the second devices for interconnecting garment panels are structured for use in donning the garment on a normal commencement of duty involving the wearing of the garment, as distinct from occasions when the garment is to be restored to the condition wrapped about at least the upper torso from which it is fallen, by re-engaging the releasable mechanical latches.

13. The garment of claim 11, wherein the second devices include complementary hook and loop fastener pads and extended buckles.

14. The garment of claim 13, wherein the extended buckles include at least one of snap engageable or press releasable buckles.

15. The garment of claim 11, wherein the plurality of garment panels have one of the plurality of mechanical latches at one location thereon, and one of the interconnecting devices at another location thereon.

16. The garment of claim 1, wherein the first portion of each of the mechanical latches is a female housing having a recess, and the second portion is a male housing having a protruding tongue for releasable insertion into the recess of the first portion.

17. The garment of claim 16, wherein the at least one latch element is biased to project from within the female housing into the recess, wherein latching within formations in the tongue of the male housing.

18. The garment of claim 17, wherein the at least one latch element is chamfered pins.

19. The garment of claim 16, wherein the recess is covered.

20. The garment of claim 16, wherein the at least one latch element is activated by cables pulling against their bias.

21. The garment of claim 1, further comprising a protection arrangement structured or configured to protect against an inadvertent release or an accidental release of the latches.

22. The garment of claim 21, wherein the protection arrangement includes a safety catch device by which the hand grip is releasably attached to the garment, such that a positive release of the safety catch device must occur before the hand grip can be pulled with respect to the garment, wherein the single operation by one hand includes the release of the safety catch and the pulling of the hand grip.

23. A quick release garment, comprising:

a plurality of co-operable garment panels, which when interconnected form a garment in a configuration wrapped about at least an upper torso of a person;

a plurality of releasable mechanical latches releasably engageable to interconnect the garment panels to form the garment in the configuration; and

a release arrangement disposed on the garment and operable in a single operation by one hand to mechanically and substantially simultaneously release the latches, the release arrangement including a pull cord configuration or a cable configuration in which a single cord or a cable with a hand grip at its remote end is structured to pull, via a multiplex coupling device, respective cables coupled to the mechanical latches, whereby the garment falls from the upper torso, wherein the multiplex coupling device includes a housing fastened to the garment for holding the coupling device in a fixed position relative to the garment.

24. The garment of claim 23, wherein a movable element within the housing is attached to the single cord or the cable and to the respective cables coupled to the latches, wherein a tug on the single cord or the cable with the hand grip pulls the moveable element and thereby in turn tugs the respective cables.

25. The garment of claim 23, further comprising a protection arrangement structured to protect against inadvertent or accidental release of the latches.

26. The garment of claim 25, wherein the protection arrangement includes a safety catch device by which the hand grip is releasably attached to the garment, such that a positive release of the safety catch device must occur before the hand grip can be pulled with respect to the garment, wherein the single operation by one hand includes the release of the safety catch and the pulling of the hand grip.

27. The garment of claim 23, wherein the single cord or the cable, and the respective cables, are non-fixedly covered by an outer sheath.

28. The garment of claim 23, wherein the garment includes a second plurality of devices for interconnecting garment panels of the plurality of garment panels, the second devices being distinct from the plurality of releasable mechanical latches.

29. The garment of claim 28, wherein the second devices for interconnecting garment panels are structured for use in donning the garment on the normal commencement of duty involving the wearing of the garment, as distinct from occasions when the garment is to be restored to the configuration wrapped about at least the upper torso from which it is fallen, by re-engaging the releasable mechanical latches.

30. The garment of claim 28, wherein the second devices include a complementary hook and loop fastener pads and extended buckle.

31. The garment of claim 30, wherein the extended buckles include at least one of snap engageable or press releasable buckles.

32. The garment of claim 28, wherein the plurality of garment panels have one of the plurality of releasable mechanical latches at one location thereon, and one of the interconnecting devices at another location thereon.

33. A quick release garment, comprising:

a plurality of co-operable garment panels, wherein the plurality of garment panels includes two first shoulder panels and two second shoulder panels, which when interconnected, form a garment in a configuration wrapped about at least an upper torso of a person;

a plurality of releasable mechanical latches, including a first latch that, when engaged, interconnects the two first shoulder panels to extend over the person's first shoulder when the garment is wrapped about the person; and a second latch that, when engaged, interconnects the two second shoulder panels to extend over the person's second shoulder when the garment is wrapped about the person, each of the latches having a first portion, a second portion and at least one latch element provided with a bias towards an engaged condition, the mechanical latches being releasably engageable to interconnect the garment panels to form the garment in the configuration wrapped about at least an upper torso of a person; and

a release arrangement disposed on the garment and operable in a single operation by one hand to mechanically and substantially simultaneously release the latches by disengaging the at least one latch element, each latch element being disengaged by withdrawing the latch element against said bias;

wherein the release arrangement is operable in said single operation to mechanically and substantially simultaneously release the first and second latches and disconnect the two first shoulder garment panels and to disconnect the two second shoulder garment panels so that the single operation allows the garment to fall from the upper torso; and

wherein the garment is rapidly restorable to the condition wrapped about at least the upper torso from which it fell, by re-engaging each of the releasable mechanical latches by pushing the first and second portions together, each latch element being pushed back against said bias until the latch element snaps into place and is reengaged.

34. The garment of claim 33, wherein the plurality of releasable mechanical latches includes a third latch that,

when engaged, interconnects two waistband panels of the garment that connect to extend adjacent the person's torso below armpits when the garment is wrapped about the person and engaged.

35. A quick release garment, comprising:

a plurality of co-operable garment panels, which when interconnected form a garment in a configuration wrapped about at least an upper torso;

a plurality of releasable mechanical latches releasably engageable to interconnect the garment panels disposed on both left and right sides of the garment to retain the garment in said configuration, such that releasing the latches allows the garment to fall off from the upper torso; and

a release arrangement including:

a manipulable member operable by hand,

a plurality of latch operating members connected to the mechanical latches to release the latches, and

a multiplex coupling device that connects the manipulable member to the latch operating members so that operation of the manipulable device operates the latch operating members to release the latches substantially simultaneously with each other to cause the garment to fall off the upper torso.

36. The quick release garment of claim **35**, wherein the multiplex coupling device includes a slide and the plurality of latch operating members includes cables or cords attached to the slide, and wherein operation of the manipulable device moves the slide to operate the latch operating members.

37. The quick release garment of claim **35**, wherein the multiplex coupling device includes a housing fastened to the garment for holding the coupling device in a fixed position relative to the garment.

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